



Public Works Standards

August 21, 2000

Approved by City Council Resolution No.87-00

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GENERAL PROVISIONS

A. Title and Jurisdiction. This Document shall be formally known as The City of Pleasant Hill Public Works Standards (the PW Standards). The PW Standards apply within the City Limits of the City of Pleasant Hill.

B. Authority. The City of Pleasant Hill has enacted ordinances covering the subdivision of land, streets and grading, traffic and motor vehicles, flood damage prevention, and stormwater management and discharge control. The PW Standards are prepared in accordance with these ordinances and other City regulations.

C. Purpose and Scope. The purpose of this title shall be to provide engineering requirements for the design and construction of public facilities in the City. These standards are intended to regulate the design of all public works facilities in the City of Pleasant Hill and are a supplement to the City Subdivision Ordinance.

D. Administration. The Public Works Department (the "Department") is responsible for administering the provisions of the PW Standards. References to the "Director" mean the Public Works Director or his or her designee.

E. Applicant's Responsibility. The review and approval of plans and other documents by the City of Pleasant Hill do not relieve the owner, engineer or designer from the responsibility of insuring that the documents and other materials prepared to comply with these standards are lawful and have been prepared to assure the health and well being of humans beings.

F. Relationship to Other Standards. These PW Standards incorporate the following by reference:

1. The State Standard Specifications: the latest edition of the Standard Plans and Standard Specifications of the State of California, Department of Transportation.
2. County Standard Plans: the Standard Plans of the Contra Costa County Public Works Department.
3. Subdivision Ordinance: the City of Pleasant Hill subdivision ordinance (Pleasant Hill Municipal Code Chapter 32).

Where a conflict arises between the standards, the stricter (higher) standard shall apply. If the State or Federal Government imposes mandatory standards that conflict with these standards, they will be supersede these standards.

G. Amendments. These PW Standards are subject to amendments and revisions. The Public Works Director may substitute updated Supplemental Documents in Section D without a formal Council amendment to these PW Standards.

H. Adjustments. Adjustments from these criteria will be considered on a case by case basis. Any proposed adjustment from these standards shall be submitted to the Director of Public Works and

accompanied by sufficient proof of the need for the adjustment, and evidence that public convenience and safety will not be compromised. No such adjustment is allowed unless specifically approved by the Director.

I. Dedication. Every street, drainage channel, easement or other right-of-way intended for public use shall be offered for dedication. The City may accept, accept subject to improvement, or reject any offer of dedication. Any dedication which is rejected remains open and may later be accepted by the City. (Municipal Code section 32-8.1, Government Code sections 7050 and 66477,2,

J. Appeals. An applicant may appeal a decision under these PW Standards by following the procedures in Section 1-9 of the Pleasant Hill Municipal Code.

B. PERMIT INFORMATION AND APPLICATION SUBMITTAL REQUIREMENTS

1. Permit Information: General.

The Department of Public Works:

- issues encroachment permits for work in the public right-of-way.
- reviews and approves Final Maps, Parcel Maps and related subdivision improvement plans.
- issues Grading and Drainage Permits for Grading for work in excess of 200 cubic yards of material moved, and for installation of engineered drainage systems.
- reviews site plans of Building Permit Applications when the work is new or when the addition or modification exceeds 30% of existing floor space or 30% of valuation.
- reviews and approves stormwater pollution prevention plans.

An outline of the plan review process is set forth on page 8.

2. Encroachment Permits.

An encroachment permit is required for any work done within the City right-of-way or a City easement.

Typical encroachment permit work involves:

- Driveway connection to the street
- Piping roof runoff to a roadway gutter
- Repairs to utilities, including water, sanitary sewer, electrical, telephone, Cable TV, natural gas facilities including service connections
- Installing/Replacing fences in City right-of-way
- Placement of Newspaper racks
- Repairing sidewalks
- Installing mailboxes, retaining walls and other permanent structures immediately behind a sidewalk or curb.

Encroachment permit applications are available at the Public Works Department at City Hall.

Permit Application Submittal Requirements:

1. Completed permit application form
2. Application fee
3. Plan. The plan must clearly convey the scope of the work to be done. Acceptable Plans can range from simple hand sketches for simple and common types of permit work to elaborately engineer professionally prepared plan sets for unusual or and large projects. Plan requirements may be waived at the discretion of the Director of Public Works.

3. Subdivisions.

The Public Works Department reviews subdivision maps (Final Maps and Parcel Maps) for conformity to the State Subdivision Map Act, the City Subdivision Ordinance, these PW Standards and the conditions of approval of the tentative map. The preparation of improvement plans (e.g., for roadways, storm drains, sidewalk, curb and gutter) generally coincides with the preparation of a Subdivision Map.

The Community Development Department administers the tentative map review process. During that process, development conditions are imposed on a subdivision as a condition to final or parcel map approval. The Public Works Department makes recommendations for conditions to assure that public facilities and the integration of public and private facilities meet the City's standards and are safe. The Public Works Department reviews plans for conformity with development conditions, and inspects construction to verify that the project is being built in conformance with plans and that the plans accurately reflect actual physical conditions.

When the subdivider submits a completed application (together with a submittal checklist and subdivision review fees), the Department begins review of the final map. During the review, additional fees may be imposed for improvement plan review, stormwater pollution prevention plan review, and inspections. These are calculated in accordance with the most current City fee schedule.

Subdivision Final/Parcel Map Review Applications are available at the Public Works Department at City Hall.

Subdivision Final Map/Parcel Map Submittal Requirements:

1. Completed Application Form with submittal Checklist - 1 original
2. The Approved Tentative Map - 1 set
3. Final Map/Parcel Map (Stamped/signed by Register Land Surveyor or Civil Engineer) -3 sets
4. Title Reports (no older than 2 years old) - 1 copy
5. Closure Calculations (Stamped/signed by Register Land Surveyor or Civil Engineer) - 2 sets
6. Improvement Plans (Stamped and signed by Register Civil Engineer) -3 sets
The Plan format is as follows:
1 in = 50 ft minimum scale
Contours extending 50 feet beyond property line, U.S.G.S.1929 datum
Existing improvements 50 feet beyond property line
Signed and Wet Stamped by RCE, RGE
Sheet sizes no smaller than 8 1/2" x 11" or greater than 24" x 36"
Ink Drawing (Hand or CADD acceptable)
7. Improvement Construction Estimate (Stamped and signed by Register Civil Engineer) - 2 sets The Cost Estimate shall be developed using Prevailing Wage Labor rates.
8. Drainage Calculations (Stamped and signed by Register Civil Engineer) - 2 sets
9. Supplemental Studies (Traffic, Parking, Circulation, sight-distance, Archeological, Geological) - 3 sets
10. Partially completed Subdivision Agreement

11. Bonds; Developer Insurance Certificate (Bonds and Insurance shall conform with the Subdivision Agreement terms. These documents shall be submitted before formal approval of the map by the City Council. .)
12. Fee (established by City Council resolution)

4. Grading Permit.

The Public Works Department reviews of mass grading plans involving 200 cubic yards or more and other grading work as required by Section 15-2.3 of the Municipal Code. Grading plans are frequently a part of subdivision development, but are also needed for other projects involving major landscaping work, redevelopment or landslide risk mitigation, or major drainage work (dredging, creek bank stabilization).

A grading permit will be issued upon approval of a grading plan found to be in conformance with City ordinances and standards:

- the grading ordinance at Municipal Code section 15-2,
- these PW Standards,
- the Stormwater Management and Discharge Control ordinance at Municipal Code Chapter 20,
- and
- the uniform building codes adopted at Municipal Code Chapter 10.

The grading plan review generally parallels the review process for subdivision improvement plans.

Whether or not work coincides with a proposed subdivision, applicants are required to complete a grading permit application and submit a grading plan prepared by a Registered Civil Engineer and a Soils Report prepared by a Registered Geotechnical Engineer and a Engineering Geologist. The plan must also be accompanied by a letter of review by the Geotechnical Engineer and Engineering Geologists to verify conformity with the Soils Report Recommendations. This application requirement may be reduced or waived by the City Engineer on sites that possess minimal geologic risks.

Grading permit applications are available at the Public Works Department at City Hall.

Grading Permit Submittal Requirements:

1. Completed Application form - 1 original
2. Soils Report (Stamped and signed by a Soils Engineer and Engineering Geologist) - 3 sets
3. Grading Plan (Stamped and signed by Register Civil Engineer, Signed by Geotech Engineer) - 3 sets
4. Earthwork Quantities (Cut/Fill/Total) (Stamped/signed by a Registered Civil Engineer) -2 sets
5. Grading Plan review letter prepared by preparer of the Soils Report) - 1 copy
6. Fee

The plan format shall be consistent with the Subdivision Plan format, above.

5. Site Plans of Building Permit Applications.

The public Works Department reviews site plans whenever they are referred to the Department by the Chief Building Official.

6. Stormwater Pollution Prevention Plans.

The Public Works Department reviews Stormwater Pollution Prevention Plans whenever such a plan is required under Chapter XX (Storm Water Management and Discharge Control) of the Municipal Code.

All development must include provisions to prevent storm water pollution during construction and when the completed project is occupied. Formal, written plans must be prepared for sites larger than 5 acres. The owner of a smaller site must expressly identify project features or practices on plans to prevent stormwater pollution.

Diagram for Review Process

C. PUBLIC WORKS STANDARDS

1. General.

Each facility that is built in the public right of way or is to become public property shall conform with the standards established in the Subdivision Ordinance and these Public Works Standards. Construction materials, methods, tests and workmanship must conform with the requirements of the most current edition of the State Standard Specifications, or as directed by the Director of Public Works.

Any proposal to subdivide property must conform to the City's Subdivision Ordinance, Chapter 32 of the Municipal Code.

2. Improvement Plans.

No work shall begin without approved plans signed by the City. Before beginning construction of any improvements, a complete set of plans, profiles, cross-sections, and other drawings for all improvements, together with a complete set of detailed specifications for the work, shall be submitted for review to the Director. After being signed approved, the applicant shall provide to the City one or more complete sets of plans, as required.

3. Streets.

a. Rights-of-way. Rights-of-way shall be created by conveyances or by offers of dedication to the City, and such offers are to be recorded. An offer of dedication becomes public property only after it is formally accepted by the City Council.

b. Classification. Streets are classed as local, collector, arterial, expressway or freeway, as provided in the General Plan.

A local street is intended to provide direct access to residential, commercial, industrial or other abutting land. It is to serve local traffic movements and is not intended to handle through traffic.

A collector street is a street which carries traffic into or out of the subdivisions or from minor streets to arterial streets. A collector street provides access to, residential, commercial, industrial and other abutting land. The number of access locations are general fewer than on a local street. A collector serves local traffic and carries through traffic.

An arterial street is a street that connects one part of the City to another or carries traffic from the City to freeways or other County arterial. An arterial primarily serves through traffic.

An expressway is a divided roadway with access provided at signalized intersections, at-grade interchanges, or grade separated interchanges. Access from an expressway to abutting land is prohibited. Expressway serve through traffic exclusively.

A freeway is a divided multi-lane roadway with highly regulated access via grade separated intersections only. Access to freeway are made via ramp from the arterial street and expressway street networks. Access to abutting land is prohibited. Freeways serve through traffic exclusively.

c. General Criteria.

- (1) Streets and driveways shall be designed and improved in accordance with these PW Standards.
- (2) Where a subdivision adjoins acreage, streets which may be extended in the event of the subdivision of the adjoining acreage shall be provided through to the boundary line of the tract, and provision for a temporary cul-de-sac may be required.
- (3) Existing dead-end streets in adjoining and continuous territory should be extended into the subdivision with continuation of the centerline of the existing street, where feasible and desirable. In such cases in which straight continuations are not reasonably possible, such centerlines may be continued by tangent curves.
- (4) Whenever a dead-end street is permitted, it shall not exceed six hundred feet in length and shall have a circular end with a minimum radius of 45 feet of right-of-way and a minimum radius of 35 feet at the curb line. Deviations from this standard must be approved by the Director or the City Council. Fire Code regulations shall be followed.
- (5) Access rights shall be restricted where required by the city for major streets or parklands.
- (6) Reserve strips controlling the access to streets or other public rights-of-way shall not be approved unless such strips are necessary for the protection of the public welfare or property.
- (7) Minimum stopping sight distance for vertical curves and headlight sight distances for sag vertical curves shall be as shown in Table 2. Stopping sight distance shall be defined as that distance at which an object on the paving 4 inches high can be seen from another point 4 feet above the paving surface.

d. Basic Standard of Street Design. The basic width of pavement and right-of-way of the various functions of streets shall be as shown on Table 1, Minimum Standards of Street Design.

The minimum standards in Table 1 provide prudent requirements, which, because of exceptional circumstances, may not be achievable. In such instances where the developer is unable to achieve the standards or believes alternative standards are appropriate, the developer shall prepare a traffic impact study to be submitted to the Community Planning Director and Director of Public Works. The study shall review, at a minimum, existing traffic volumes, projected increases caused by the proposed development, cumulative traffic increases caused by projects using the roadway, and alternative roadway designs. It is the developer's responsibility to show to the satisfaction of the Planning Commission and City Council that the probable future traffic conditions justify alternative road widths. Increased widths may be required where probable traffic conditions warrant them.

Table 2 also establishes prudent requirements, which, because of exceptional circumstances, may not be achievable. In such instances where an engineer is unable to achieve the standards or

believes alternative standards are appropriate, the engineer shall prepare a study to be submitted for to the Director for review. It is the responsibility of the engineer to show to the Director that the deviation from the standards will not harm or otherwise adversely impact the public.

Access easements, alleys and driveways serving two or less units shall have a minimum right-of-way of 20 feet with a surfaced roadway of 15 feet in width.

All streets shall intersect as nearly as possible at right angles.

Side streets entering from opposite sides of a street shall have their center lines directly opposite each other or the center lines shall be offset by at least 150 feet.

The minimum distance between streets entering a thoroughfare is 800 feet.

Roadway layout will conform to the limits contained in Table 1.

TABLE 1
MINIMUM STANDARDS OF STREET DESIGN

Street Type	ADT	ROW Width	Curb/ Curb Width ¹	Striped lane width	Parking lane ²	Parking strip width	Median width ³
Local	700	50'	36'	10'	8'	7'	0
Collector							
Residential	10,000	60'	40'	12'	8'	10'	0
Commercial	14,000	70'	50'	12'	9'	10'	0
Arterial							
2-lane	10,000	60'	40'	12'	8'	10'	0
4-lane	25,000	96'	70'	14-12'	9'	10'	6'
6-lane ⁴	41,000	120'	78'	14-12'	0	12'	18'
6-lane	36,000	136'	94'	14-12'	9'	12'	18'
Expressway	Caltrans Standards, CEQA ⁵ mitigations, NEPA ⁶						
Freeway	Caltrans Standards, CEQA mitigations, NEPA mitigations						

Notes: 1. Pavement width may vary, depending upon the design of the development served

2. Bicycle Lanes may be installed where appropriate. Director of Public Works will determine whether the Lanes will require additional pavement width or whether the Lanes will replace on street parking.

3. New vegetated landscaped medians shall not be less than 16 feet wide unless approved by the Director of Public Works.

4. On-street parking is prohibited.

5. California Environmental Quality Act

6. National Environmental Protection Act

TABLE 2
ADDITIONAL STREET STANDARDS

Design Element	Arterial	Collector	Local
Maximum Grade	8%	15%	20%
Minimum Grade	1%	1%	1%
Grade thru Intersection	6%	6%	6%
Intersection Approach grade (to 30 feet beyond curb face of crossing street)	6%	6%	6%
Horizontal Curves Min. Radius	650 feet	200 feet	75 feet
Min. Vertical Curve lengths	200 feet	100 feet	50 feet
Max rate of grade change at crests	1.2%/100 feet	4%/100 feet	10%/100 feet
Stopping Sight Distance	350 feet	200 feet	100 feet
Traffic Index	Caltrans Design Manual	Caltrans Design Manual	Caltrans Design Manual
Cross Slope	2%	2%	2%
Driveway Curb return radii	30'	20'	20'

e. Pavement Structural Design. The structural design of the roadbed includes the determination of the thickness and type of sub-base, base, and surfacing to be placed over the basement soil according to an accepted method approved by the Public Works Department. The Director shall approve the structural design before start of construction.

The thickness of base material shall not be less than 8 inches and the thickness of asphalt concrete surface shall not be less than 2 inches. Final thicknesses of the roadway structure will be determined by "R" values and submitted to the Director for approval.

Traffic index used for pavement design shall be as shown Table 2 unless otherwise approved by the Director in writing.

The developer, at his expense, shall make tests of the soils over which the surfacing and base is to be constructed and furnish the test reports to the Public Works Department for use in determining a preliminary structural design of the road bed. After rough grading has been completed, the subdivider, at his expense, shall provide the director of public works test reports to determine the final structural design of the road bed.

f. Curbs & Gutters. Concrete curbs shall be provided on both sides of all streets unless otherwise approved by the City Council. Curbs on all streets shall be 6 inch standard vertical curb and gutter made of Class "B" concrete. The width, location and grades of the curbs shall be reviewed and approved by the Director in accordance with the tentative map.

Median curbs shall be standard 8 inch vertical curb without gutter. Concrete curb extruded, or poured, on top of asphalt is prohibited unless approved by the director of public works.

g. Sidewalks. Sidewalks shall be provided on both sides of all streets. Sidewalks shall be unobstructed by utility installations or by plantings.

Sidewalk installation may be deferred when it is determined by the Director or City Council that the required facility will not result in a significant continuous pedestrian route. When improvements are deferred, the developer shall execute and record a deferred improvement agreement.

Sidewalk requirements may be waived when it is determined by the Director that the specific street in question is so situated that pedestrian traffic will be minimal or because of specific design considerations that alternative pedestrian paths are preferable. The path's structural design shall be approved by the Director.

h. Access Ramps. Access ramps are required and shall comply with the Americans with Disabilities Act.

i. Medians. Medians built in a public street shall not be underlain by asphalt, base rock or other rubble or waste material. All medians shall contain at least 18 inches of approved topsoil and shall be provided with an approved automatic sprinkler system which is separate from any private system. Watering systems shall be provided to all medians and shall be supplied by a meter which is separate from any privately maintained landscaping water system.

Planting of medians shall be according to plans and specifications prepared by a qualified landscape architect and approved by the Director.

Median curbs shall conform to curb and gutter standards set forth elsewhere in these Standards.

j. Street Trees. The developer is required to plant street trees every 30 feet on centers along all public streets within and bordering the development, or at other spacing which for good cause may be allowed by the city. The trees shall be of 15-gallon size and of the species approved by the Director.

The exact location, species, and size of trees approved to be installed shall be shown on the improvement plans. Landscape plans sheets showing street tree installations may be submitted as a part of the improvement plan set. Tree species selected should not drop seed pods, sap, oils or other deleterious material onto the roadway surfaces. Selected species should also have root systems that deeply penetrate the ground and do not spread along the surface in a manner that lifts sidewalks and pavements. Trees that are to be irrigated by a publicly maintained irrigation system shall be drawn separately from private on-site landscaping.

Planting shall conform to the requirements of Contra Costa County Drawing No. CC3052.

k. Street Lights. Street lights shall be designed in conformance with the criterion used by Pleasant Hill whereby lighting is equivalent to 50% of that recommended by Illuminating Engineering Society. The City's requirements are as shown in Table 3.

Table 3 Roadway Illumination Levels

Road Type	Commercial (Footcandles)	Residential(Footcandles)
Local	0.5	0.2
Collector	0.6	0.3
Arterial	1.0	0.5
Expressway	0.7	0.5
Freeway	0.3	0.3

New street lights shall be fully shielded or cutoff type except as approved by the Director.

Installation shall be required and the location of electroliers shall be shown on the construction plans in plan view and a typical street cross-section as required by the Director. It is the responsibility of the developer to make necessary arrangements with the serving utility for the installation of a utility-owned and maintained street lighting system to be served at the lowest applicable rate available to the city. The standard cobra head lighting will be used unless other lighting is approved by the Public Works Department in advance of the approval of the improvement plans. Spacing, lamp wattage and other design considerations shall be coordinated with and approved by Pacific Gas and Electric Company.

l. Pedestrian Facilities.

Paths. Pedestrian paths shall be paved with concrete not less than 6 feet wide. Pedestrian paths of concrete shall be at least 4 inches thick on 3 inches of aggregate base rock. Asphalt path structural section shall be 2 inches thick over 6 inches of aggregate base unless the director of public works requires an engineered structural section.

Pedestrianways. Pedestrianways 10 feet or more in width may be required through the middle of blocks which are more than 1,200 feet in length, and to connect cul-de-sacs or to provide access to playgrounds, parks, schools, shopping centers, or similar community facilities. The developer shall install paving, landscaping, and fences as required by the Director of Public Works and Community Development Director unless otherwise waived.

m. Bikeways. Paved bikeways in the public right-of-way are required on arterial and collector routes and in all locations designated by the Public Works Department. Bikeways outside the city right-of-way shall be approved by the Community Development Director.

The design and placement of bikeways shall conform to the standards of the state of California Department of Transportation entitled "Chapter 1000, Bikeway Planning and Design, Highway Design Manual, California Department of Transportation" or as revised, pursuant to Sections 890 (Bikeways Act) of the Streets and Highway Code, or as revised.

The structural thickness of public bikeways outside of roadway right of ways shall be the same as for pedestrian paths.

The developer shall furnish and install appropriate signs as may be required by the Director.

n. Trails. Trails shall be built and graded as may be required by the Community Development Director. Related improvements (e.g. fencing, signs, etc.) shall be provided as necessary for the public health, safety, and general welfare.

o. Private Streets. Private street design is regulated by the Community Development Department. City engineering staff may be consulted during the review and approval processes. Private streets, if allowed, must be designed and approved before the final map is approved by the Public Works Department.

Private roadways, alleys, or other ways shall not be permitted unless provision are made for their permanent maintenance. Private streets shall be designated as such on the improvement plans.

All private streets entering onto public streets shall enter by way of a standard driveway unless approved by the Director. Private street name signs which are significantly different than public street signs shall be installed at each intersection.

p. Signs. The developer shall provide and install all standard traffic-regulatory and warning signs. Such signs shall be of the design and type established in the State of California Department of Transportation sign specifications sheet, Section 56 of the State Standard Specifications and as approved by the Director. Signs conforming to these standards shall be installed at locations as approved by the Director.

q. Street Names. Proposed street names shall be shown on the tentative map. Street names shall be reviewed and approved by the city's street naming committee before submittal of the final map. The City Council must approve the renaming of any existing street.

r. Metal Beam Barricades. The use of metal beam barriers is discouraged. Aesthetically pleasing protective roadway measures such as berms, protective landscape walls and planters as approved by the Director of Public Works with consultation of the Director of Community Development are the preferred protective measure. If used, metal beam barricades shall conform to the requirements of Contra Costa County Drawing No. CC302.

4. Utilities.

a. General. All utility distribution facilities (including, but not limited to waterlines, sewer, lines, telephone, gas, electric, digital and analog communication, and cable television lines) installed in and for the purpose of supplying service to any development shall be placed underground in accordance with the utility's rules and regulations on file with the California Public Utilities Commission. Equipment appurtenant to underground facilities, such as surface-mounted transformers, street light poles, pedestal-mounted terminal boxes, and meter cabinets and concealed duets, may be installed above the surface of the ground, subject to the review and approval of the Director of Public Works. The proof of the financial arrangements for the installation of utilities must be submitted before the final map and improvement plans are submitted for approval.

The developer shall provide utility easements as required by the utility companies.

b. Sanitary Sewer Facilities. The sewer design shall be shown on the improvement plans.

Sanitary sewer facilities shall be shown on all maps and shall be installed in accordance with plans approved by the authorized sanitary district (Central Contra Costa Sanitary District or East Bay Municipal Utility District) and the Director.

The location of sewer lines, pipe lines, pipe sizes, grades, manholes, and rodding inlets (cleanouts) shall be as approved by the authorized sanitary district (Central Contra Costa Sanitary District or East Bay Municipal Utility District) and the Director.

Sanitary sewers shall be installed to the end of new paving on any street that might need sewer extension to avoid need for a trench cut in new paving.

Sanitary sewer easements, not less than ten feet in width shall be provided within the development where required for construction and maintenance purposes.

c. Water Facilities. The developer shall make financial arrangements for water service to every new lot created in a subdivision. Plans for water distribution systems prepared by the Contra Costa Water District or East Bay Municipal Utility District shall be considered a part of the improvement plans. Water distribution system plan sheets shall be bound into the plans set before the plan is approved and released for construction. The improvement plans shall show the location of the water lines in sufficient detail to judge their compatibility with the other public works facilities.

d. Fire Hydrants. The location and type of all fire hydrants shall be approved by the Contra Costa Fire Protection District and either the Contra Costa Water District or the East Bay Municipal Utility District.

Developers shall install fire hydrants, gated connections, and appurtenances as required by the Contra Costa County Fire Protection District. Such hydrants, connections, and appurtenances shall be a part of the improvement plan of the development.

Inspection and approval of fire hydrants, gated connections and appurtenances, as required here, shall be by the Chief of the Contra Costa Fire Protection District.

5. Fences and Soundwalls. Where lots front on one street but back up to another street or where no access is allowed, there shall be provided a decorative wall of heavy wood or masonry construction which shall be a minimum of six feet in height as measured from the highest adjacent finish elevations. The design and material of the wall shall be reviewed and approved by the Architectural Review Commission at the time of action on the tentative map for a subdivision. Any other walls or fences required as a condition of approval of any tentative map shall be of a design, type, and material be subject to the approval of the Architectural Review Commission.

Where frontage will be maintained by a private property owner, fences are not required. Where a lot backs up to a public street, or where a sideyard has no access to the public street, or where other conditions warrant, a fences will be provided on the private property side of the property line unless the Director approves an encroachment permit.

The fences will be designed in conformance with standards set by the Community Development Department. Only the location of the fence will be shown on the improvement plans.

Any landscaped area between the fence and the curb will be shown in detail on the improvement plans. Limits between private and public maintenance shall be clearly shown. The landscape plans shall be approved by both the Maintenance Superintendent (public maintenance) and the Community Development Department (private maintenance) before they are shown on the improvement plans.

6. Grading and Erosion Control.

a. General. Before a final subdivision map is submitted to the City Council by the Public Works Department, the approved grading plan must be signed by a registered civil engineer experienced in soils. The certification shall show the name of his firm. The engineer shall certify that the approved grading plan conforms to the Uniform Building Code and incorporates his or her recommendations.

Before the final map is submitted to the City Council, the Public Works Department must have assurance that the soils engineer, or another engineer in the same firm, will personally supervise the grading operations and will prepare an as-built drawing showing what was actually constructed. The engineering firm must state that they will sign the as-built drawing certifying that the work shown on the as-built drawing was completed and that it conformed to their recommendation.

Every subdivision map shall be conditioned on compliance with the requirements for grading and erosion control, including the prevention of sedimentation or damage to offsite property, as set forth below.

1. Grading shall be done in accordance with the Uniform Building Code and the recommendations of an approved Soils Report prepared by a register Soils Engineer and Engineering Geologist.

2. No grading shall be done without prior review and approval of the Director of Public Works (major grading, site grading) and the Director of Community Development (environmental compliance).
3. A final map will not be approved in any hillside area until an erosion control plan has been approved by the Director of Public Works. The plan shall include provisions for controlling erosion and sediment during grading and construction, and designed so that erosion is minimize after the construction is completed.
4. The subdivider may be required to provide security for the performance of the work described and delineated on the approved grading plan in an amount equal to the cost of the work, as publicly constructed, plus ten percent (10%) as approved by the Director. The form of the security shall conform to the requirements of the subdivision ordinance.

b. Soils and geologic report. A preliminary soils and geologic report, prepared jointly by a licensed civil engineer specializing in soils engineering and a registered engineering geologist, based upon adequate test borings, shall be submitted to the Director of Public Works and Community Development Director for every subdivision for which a final map or parcel map is required. The report shall indicate the presence of any critically expansive soils or any other soils problems which, if not corrected, may lead to health and safety risks or property damage. If the report indicated the presence of critically expansive soils or other soils problems which, if not corrected, may lead to health and safety risks or property damage, it shall further report on an investigation of each lot of the subdivision, including recommended corrective action which is likely to prevent structural damage to each building, structure, or improvements to be constructed and existing adjacent property. The report shall contain a geologic map and description of geologic formations and structures significant to the safety and performance of improvements; the map shall include faults, existing active or inactive landslides, and areas subject to earthquake ground failure as-by liquefaction. The report shall also report on "R" values necessary to determine structural adequacy of roadways and the suitability of the earth material for construction of stable embankments and excavation slopes, including those necessary for any artificial or natural drainage channel; recommendations for construction procedures to obtain required stability; maximum design velocities for any natural or artificial earthen drainage channel; and any other unstable soils conditions, springs, and seepage conditions, erosion control planting, or drainage facilities to enable proper development of the subdivision.

A preliminary soils report may be waived with the approval of the Director, providing the director of public works finds that due to the knowledge the city has as to the soils properties of the soils in the subdivision, no preliminary analysis is necessary.

A preliminary soils report may be required for subdivisions of less than five lots, if the Director finds that due to the knowledge the city has as to the soils qualities of the soils in the subdivision, a preliminary analysis is necessary. (Note: No waiver is required for a subdivision of less than five lots if the director of public works finds that a preliminary analysis is unnecessary.)

c. Stormwater Pollution Prevention Plan. Before the final map is submitted to the City Council by the Public Works Department, the developer's engineer must submit a stormwater pollution prevention plan. The plan must demonstrate that money, material, and personnel will be available 24

hours a day to protect the project against erosion and other forms of stormwater pollution from the time grading first starts until all public works facilities are completed and all building sites have been secured against erosion. Construction related stormwater pollution prevention work shall be considered an item in the total construction costs and shall be assured prior to issuance of permits and release of approved final map. (See also Municipal Code Chapter XX.)

7. Drainage.

a. General. Each lot shall drain to a public street or to a City-owned and maintained storm drainage facility unless otherwise approved by the Public Works Department.

Habitable structures within a development shall be protected from inundation, flood hazard, sheet overflow, and ponding of storm water, springs and other surface waters. The design of improvements shall be such that rainfall runoff occurring within the development will be carried from it without injury to improvements or property within the development or to adjoining areas. Rainfall runoff occurring within the development shall be carried to a public storm drainage facility or to a natural watercourse.

Drainage design within the development shall be designed to anticipated future development within the drainage area. An off-site drainage facility required to carry storm water from the proposed development to a defined channel or conduit shall be adequate for the ultimate state of development in the drainage area.

b. Runoff Determination. Runoff quantities shall be determined by the Rational Method using basic data supplied by the Flood Control District for the frequency of occurrence stipulated here. The Hydraulic Grade line for proposed drainage facilities shall be determine for the 25 year 6-hour event and the 100 year 6-hour event when required by the Director.

Systems draining water from more than a 4-square mile area will be designed to capacitate a 50-year frequency storm. All other systems will be designed to capacitate a 25-year storm. All systems shall be designed so that if the storm drain system overflows, the overflow will be carried away by streets or other channels without causing flooding above residential floor levels.

c. Stormwater conveyance facilities. Major drainage channels and conduits shall have sufficient capacity to contain a minimal 50-year frequency of occurrence runoff. All other channels and drainage facilities shall have a minimum of 25- year recurrence interval 6-hour storm frequency.

Waters within street areas shall be placed in closed conduits when the maximum depth of computed flow exceeds the capacity of the gutter or creates traffic hazard or endangers property.

Storm water shall be placed in closed conduits where the quantity does not exceed 80 cubic feet per second unless an open water course is desired and where long term maintenance of the water course is assured.

Design of drainage channels, conduits, and appurtenances shall conform with design standards of the Flood Control District and approved by the Director.

Water in the street area shall be placed in closed conduit when the horizontal extension of the water in the gutter encroaches more than 2 feet into the adjacent traffic lane as indicated by County gutter flow Chart 73-120. The distance between catch basins shall not be more than 300 feet.

Minimum Pipe Size. No public storm drain pipe shall have a diameter of less than 18 inches. Hydraulic grade lines shall be determined at the time the culvert size is determined. The Hydraulic Grade line shall be at or below the pipe crown for the design storm at inlets, manholes, junction boxes and other facilities that open to the ground surface.

Manhole Design. All storm drain lines smaller than 42 inches shall be straight (without bends between ending structures). A manhole shall be provided anytime additional lines come into the main storm drain system or where a bend is required in the main storm drain line. Manholes shall conform to the requirements of County Standard drawings.

Manhole spacing.

Inside Diameter of Culvert	Maximum Distance between Manholes
18" - 30"	250 Ft
32" - 72"	500 Ft.
72" and larger	750 Ft.

Catch Basin Design. Catch basins shall be constructed for the purpose of carrying water from the gutter to the storm drain system. A minimum 18-inch pipe shall carry water from the catch basin to the storm drain system. A manhole shall be provided anywhere a catch basin line enters into the system. All catch basins shall be Type "A" or Type "C" as shown on County Standard Drawing CC 3011 or CC 3013. Catch basins shall not be located within driveways.

d. Right-of-way for City-maintained Drainage Facilities. The developer shall provide the necessary right-of-way dedication or easements for watercourses, streams, and storm drains as required by the Director, Flood Control District and the General Plan.

Except as may be approved by the Planning Commission or City Council, there shall be sufficient right-of-way dedicated to the City to maintain a natural channel, floodplain, or open space as may be shown in any element of the General Plan.

The developer shall provide storm drain easements not less than 10 feet in width when required for construction and maintenance purposes.

City-maintained drainage systems should be located within roadway right-of-ways. Where the City-maintained drainage system is not to be in a public street, a drainage easement not less than 10 feet wide will be dedicated to the City in fee on the final map.

e. Drainage Construction. Drainage facilities shall be installed in accordance with the Contra Costa County Flood Control and Water Conservation District plans and standard specifications.

All drainage structures such as drainage pipe, collection boxes, catch basins, manholes, etc., will be designed in accordance with Standard Plans used by the Contra Costa County.

f. Subsurface (Groundwater) Drains. All sub-drains known to be needed by the soil engineer prior to construction shall be shown on the grading plan. All sub-drains determined to be needed during construction shall be shown on the as-built improvement plans and the improvement plans shall be signed by the soils engineer to attest to the construction of such drains.

g. Natural Streams. It is the City's desire to retain natural streams that will retain their stream bed, Streams that are on a gradient above the scouring velocity will not be allowed. The developer or his or her engineer shall submit a plan showing natural streams. The plan must be approved by the Planning and Public Works Departments before the improvement plans are commenced.

The Planning Commission may recommend that an existing natural watercourse endowed with significant natural beauty in the form of trees, shrubs, or scenic attraction, be utilized for an open drainage facility. If the Planning Commission or City Council makes such findings, the natural watercourse shall not to be disturbed. The developer shall grant a riparian easement for the natural watercourse and shall provide for its maintenance. A drainage system shall be designed that conveys the increased peak runoff flows of the development within closed conduits yet lets historic flows run into the natural water course.

The lining of natural water-courses with concrete or other man-made product is prohibited. Limited improvements of drain culvert outlets may be made subject to approval by the State Water Resources Control Board or its duly Authorized Regional Water Quality Control Board.

8. Construction Notes. The following notes shall be copied onto all plan sets to be approved and permitted by the City:

- a. All construction materials and methods for public facilities shall comply with the ordinances, specifications and standards of the City of Pleasant Hill. Order of precedence is City of Pleasant Hill Public Works Standards, California Department of Transportation Standard Specifications and Contra Costa County Standards.
- b. All street improvements and storm drain work are subject to inspection and approval of the Public Works Department.
- c. Before placing sub-base material, the Public Works Department shall be notified in writing by the owner, or accepting agency, of each installation (utility) beneath the area to be paved that the installation has satisfactorily passed final acceptance tests.
- d. Paving conforms shall be made at a butt joint.
- e. All underground utilities within the right of way, including mains and laterals, shall be installed and backfill completed prior to the start of curb and sidewalk construction.
- f. Reinforced concrete pipe used for storm drains shall meet the requirements of Section 30 of the County Ordinance specifications.

- g. The thickness of sub-base, base and surfacing for roadway shall be determined by "R" value tests and shall be approved by the Director of Public Works.
- h. Street name signs shall be standard City-double-faced single plate signs with scotchlite white letters on green scotchlite background. The plates shall be fastened with heavy-duty slotted lock "VI4(HD)SL" as supplied by Hawkins and Hawkins, Inc., or approved equal.
- i. All public streets or storm drains will be constructed only from plans signed by the Director of Public Works.
- j. During construction, the contractor is responsible for keeping mud or other debris off of the public streets adjacent to the project. The public street shall not be used to store materials or to park construction trailers or other such vehicles for extended periods of time, in violation of either the California Vehicle Code or Chapter 8, Article 1 of the Pleasant Hill Municipal Code.

SUPPLEMENTAL DOCUMENTS

Supplemental Documents

Public Works Development Application
Subdivision Final Map Application Submittal Checklist
Right-of-Way Widths
Grades, Curb Radii, Block Length, Cross-Street Separation
Horizontal and Vertical Curves
Residential Driveway Approach
Commercial Driveway Approach
Curb, Gutter & Sidewalk Construction Details
Standard Curb, Gutter and Sidewalk
Sidewalk, Curb & Gutter Repair Criteria
Sidewalk Drain Detail



City of Pleasant Hill

DEPARTMENT OF PUBLIC WORKS
PHONE - (925) 671-5264
FAX - (925) 676-1125

100 Gregory Lane
Pleasant Hill, CA 94523

PUBLIC WORKS DEVELOPMENT APPLICATION

I. Permit Type

☐ FINAL MAP
☐ PARCEL MAP

☐ IMPROVEMENT PLAN
☐ GRADING PLAN

II. General Data

Project Name _____ Subdivision Number _____
Site Street Address _____
Assessor's Parcel Number _____

III. AUTHORIZATION

In signing this application, I, as owner and/or applicant, represent to have full legal capacity to, and hereby do authorize the filing of this application. If this application is not signed by the property owner, attached is separate documentation of full legal authority to file this application. I agree to be bound by the conditions of approval of this application, subject only to an appeal period of 7 days. I certify that the information on this application is true and correct.

Applicant Name _____ Title _____

Applicant Company Name _____

Applicant Address _____

Applicant Telephone _____ FAX _____ E-Mail _____

Signature: _____ Date: _____

Property Owner Name _____

Property Owner Address _____

Property Owner Telephone _____ FAX _____ E-Mail _____

Signature: _____ Date: _____

TO BE COMPLETED BY STAFF

Application Title	Application No.	Received By:
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City of Pleasant Hill

DEPARTMENT OF PUBLIC WORKS
PHONE - (925) 671-5264
FAX - (925) 676-1125

100 Gregory Lane
Pleasant Hill, CA 94523

SUBDIVISION FINAL MAP APPLICATION SUBMITTAL CHECKLIST

☐ First Submittal

☐ Follow-up Submittal

FIRST SUBMITTAL REQUIREMENTS

- ☐ Completed Application Form (include this checklist, completed)
- ☐ Application Review Fees
- ☐ Final Map/Parcel Map
- ☐ Closure Calculations
- ☐ Title Report
- ☐ Improvement Plans
- ☐ Cost Estimate (Include Grading, SWPPP, Use Prevailing Wage Labor Costs)
- ☐ Drainage Calculation Report
- ☐ Grading Plan
- ☐ Soils Report
- ☐ Earthwork Quantities
- ☐ Storm Water Pollution Prevention Plan

FOLLOW-UP SUBMITTAL REQUIREMENTS

- ☐ Revised Documents
- ☐ Initial Review marked-up plans
- ☐ Executed Subdivision Agreement
- ☐ Bonds (\$1,000 cash, Payment Bond, Performance Bond)
- ☐ Insurance Certificates
- ☐ Payment of Fee Balance

Prepared By: _____

Date _____

Phone No. _____

*Four-lane arterials shall be considered individually.

RIGHT-OF-WAY WIDTHS

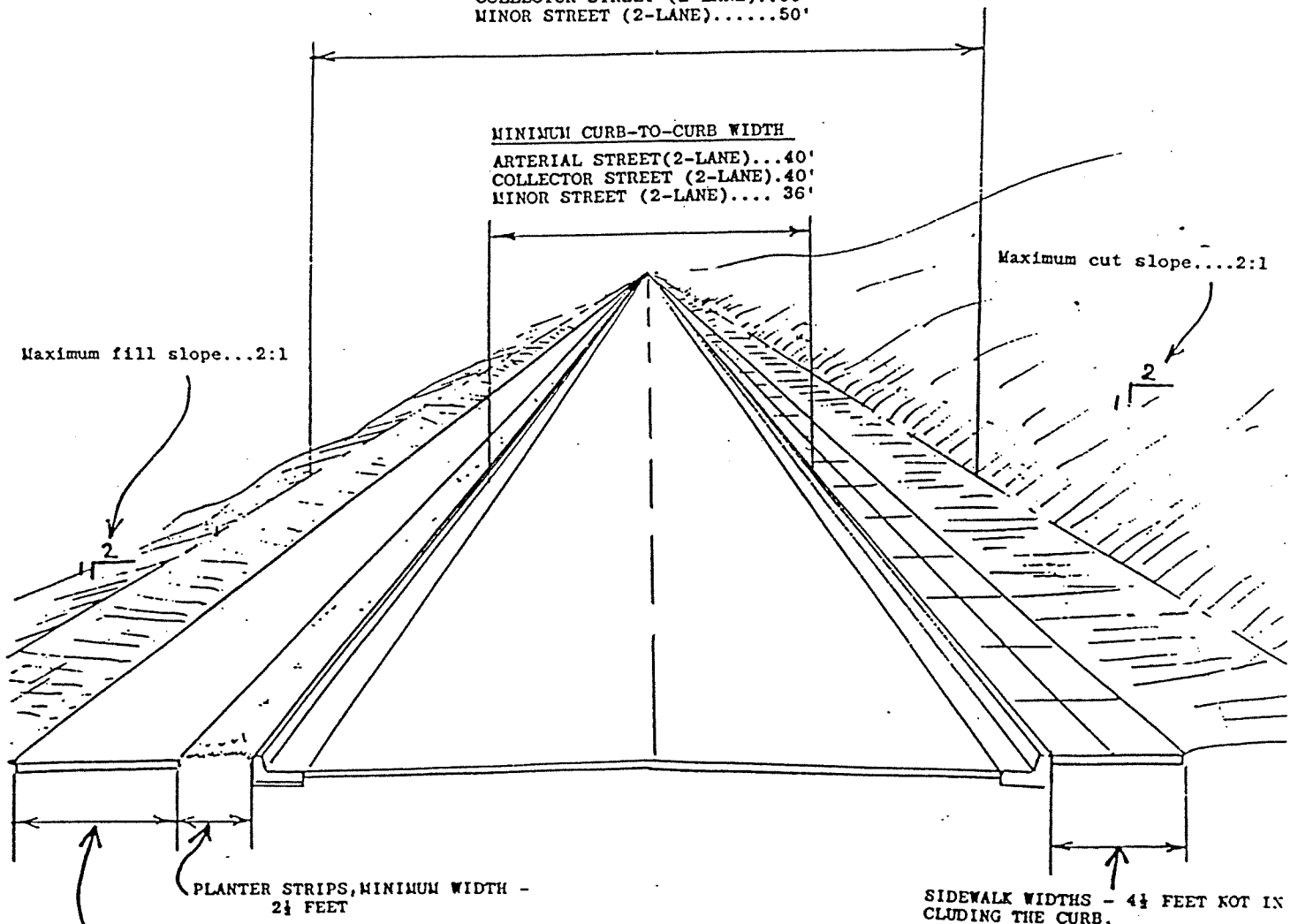
ARTERIAL STREET (2-LANE)...60'
COLLECTOR STREET (2-LANE)...60'
MINOR STREET (2-LANE).....50'

MINIMUM CURB-TO-CURB WIDTH

ARTERIAL STREET(2-LANE)...40'
COLLECTOR STREET (2-LANE)...40'
MINOR STREET (2-LANE).... 36'

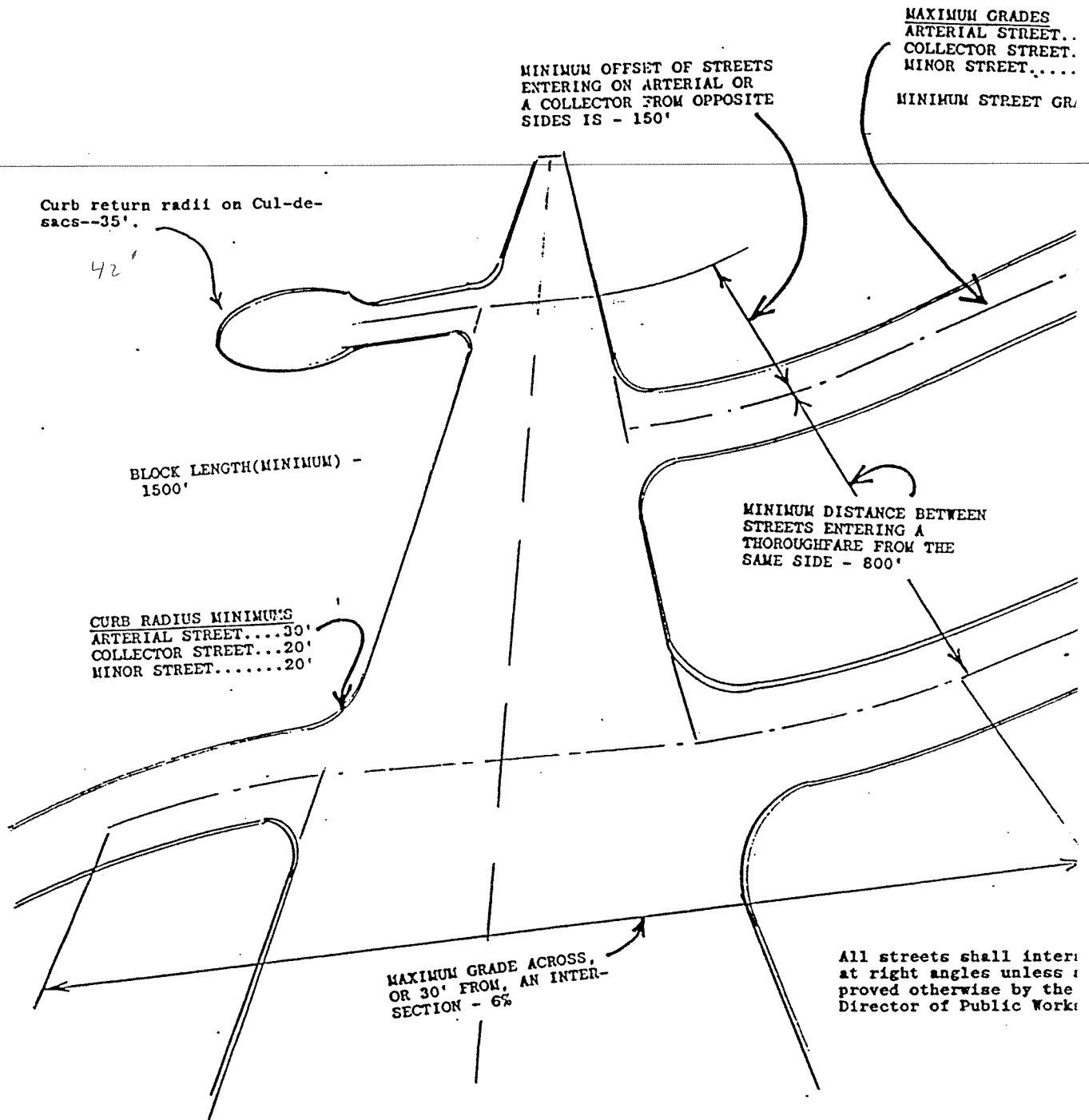
Maximum cut slope....2:1

Maximum fill slope...2:1



PEDESTRIAN PATHS
MINIMUM PAVED WIDTH - 6'

CITY OF PLEASANT HILL
PUBLIC WORKS STANDARDS



GRADES, CURB RADII, BLOCK LENGTH
 CROSS-STREET SEPARATION,

CITY OF PLEASANT
 PUBLIC WORKS STAFF

HILLCREST SAFETY CRITERIA

THE MAXIMUM RATE OF CHANGE OF
GRADE AT CRESTS OF VERTICAL
CURVES:

ARTERIAL STREETS...1.2%/100
COLLECTOR STREETS...4%/100
MINOR STREETS.....10%/100

MINIMUM VERTICAL CURVE LENGTHS

ARTERIAL STREET	200'
COLLECTOR STREET	100'
MINOR STREET	50'

SIGHT DISTANCE ON VERTICAL CURVE

MINIMUM STOPPING SIGHT DISTANCE
VERTICAL CURVES AND HEADLIGHT SIGHT
DISTANCE FOR SAG VERTICAL CURVE
SHALL BE AS FOLLOWS:

ARTERIAL STREET...350'
COLLECTOR STREET...200'
MINOR STREET.....100'

MINIMUM CENTER LINE HORIZONTAL
CURVE RADIUS

ARTERIAL STREET.....650'
COLLECTOR STREET.....200'
MINOR STREET.....75'

All curve radii shall be
shown.

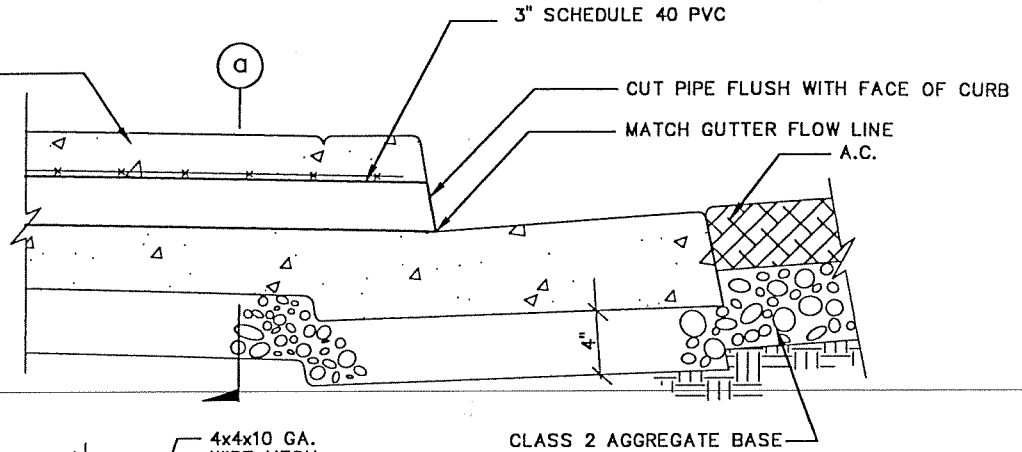
All existing drainage
facilities, ditches, well
springs, etc., must
be shown on tentative maps.

Tentative maps shall show
edges of existing roads.
drainage flow direction
shall be indicated.

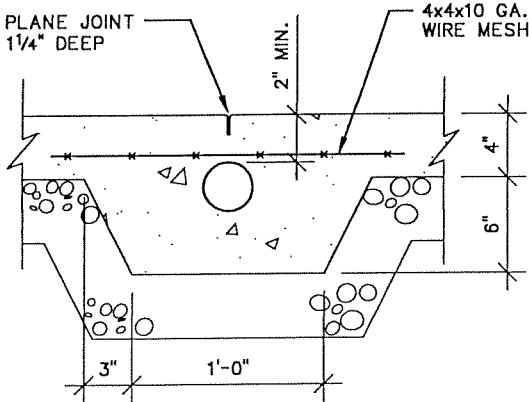
CITY OF PLEASANT HILL
PUBLIC WORKS STANDARD

HORIZONTAL AND VERTICAL
CURVES

SIDEWALK PER DETAILS
a/C1-2 AND a/C1-3.



WEAKENED PLANE JOINT
1/8" WIDE x 1 1/4" DEEP

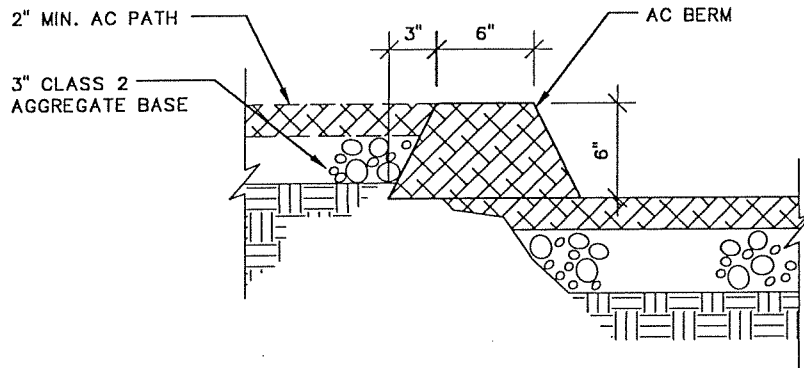


NOTES:

1. OWNER SHALL BE RESPONSIBLE FOR CLEANING AND MAINTAINING PIPE.
2. MINIMUM SLOPE TO BE 1% FOR DRAIN PIPE.
3. PLACE WIRE MESH FULL LENGTH 2'-0" ON EACH SIDE OF PIPE.
4. MINIMUM SIDEWALK, CURB & GUTTER REMOVAL IS ONE FLAG - SCORE LINE TO SCORE LINE.
5. DOWEL SIDEWALK, CURB & GUTTER PER 2/C1-4 AND 3/C1-4.

SECTION

SIDEWALK DRAIN DETAIL



ASPHALT CONCRETE BERM



CITY OF PLEASANT HILL

DEPARTMENT OF PUBLIC WORKS

DWG. NO.: C1-5.DWG

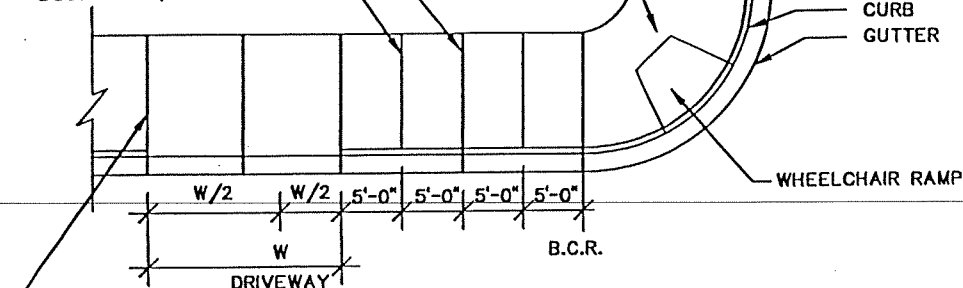
DATE: 6/7/99

SCALE: 1" = 1'-0"

MISCELLANEOUS CONCRETE
& ASPHALT DETAILS

WEAKENED PLANE JOINTS SHALL BE INSTALLED IN ALL NEW SIDEWALK AT THE BEGINNING AND END OF ALL CURB RETURNS.

WEAKENED PLANE JOINT, TYP.
SCORE LINE, TYP.

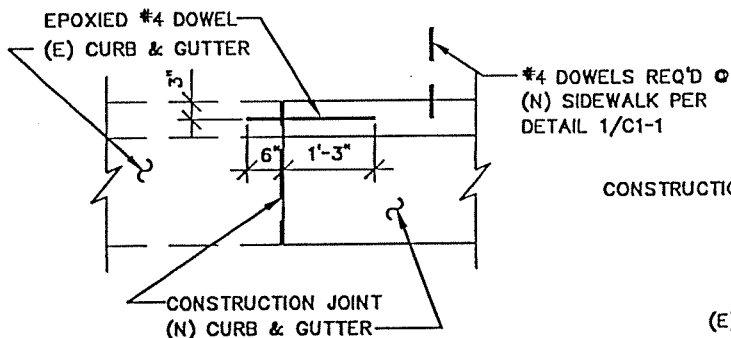


WEAKENED PLANE JOINTS SHALL BE INSTALLED AT EACH END AND THE CENTER OF ALL DRIVEWAY APPROACHES.

WEAKENED PLANE JOINTS AND SCORE LINES

1

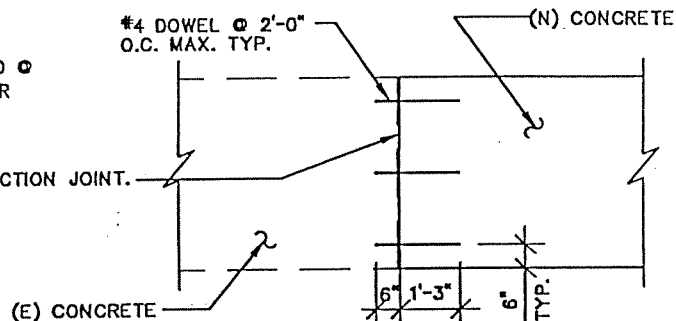
1/16" = 1'-0"



(N) & (E) CURB & GUTTER

2

3/8" = 1'-0"



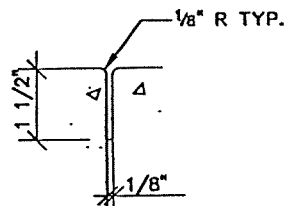
(N) & (E) CONCRETE

3

1/4" = 1'-0"

NOTES

1. WEAKENED PLANE JOINTS SHALL BE PLACED EVERY 10'-0" MAX. AND SHALL EXTEND FROM BACK OF SIDEWALK TO GUTTER LIP.
2. TOOL SCORE LINES 1/4" DEEP SHALL BE PLACED EVERY 10'-0" EXTENDING ACROSS SIDEWALK ONLY, EXCEPT WHEN ADJACENT TO AN (E) DRIVEWAY OR SIDEWALK, IN WHICH CASE THEY SHALL CORRESPOND TO (E) LINES. LONGITUDINAL SCORE LINES WILL BE REQ'D IN SIDEWALK 6'-0" OR MORE IN WIDTH AT CENTER OF WALK.
3. CONSTRUCTION JOINTS SHALL BE REQ'D IN CURB, GUTTER, SIDEWALK, DRIVEWAY AND VALLEY GUTTER WORK WHENEVER (N) CONCRETE IS TO BE POURED AGAINST (E) CONCRETE.
4. ALL DOWELS SHALL HAVE MIN. 1 1/2" COVER.



WEAKENED PLANE JOINT

4

3" = 1'-0"



CITY OF PLEASANT HILL

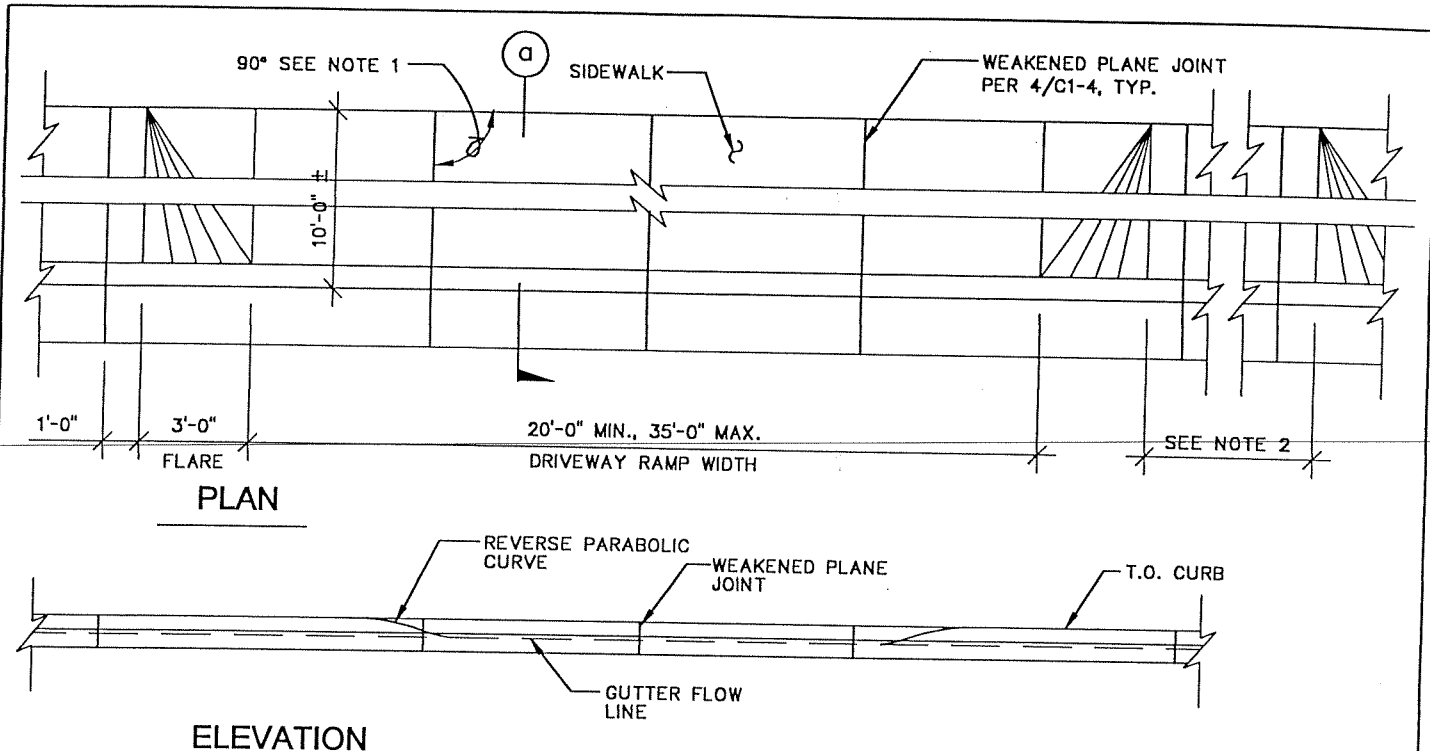
DEPARTMENT OF PUBLIC WORKS

DWG. NO.: C1-4

DATE: 7/29/99

SCALE: AS NOTED

CURB, GUTTER & SIDEWALK
CONSTRUCTION DETAILS



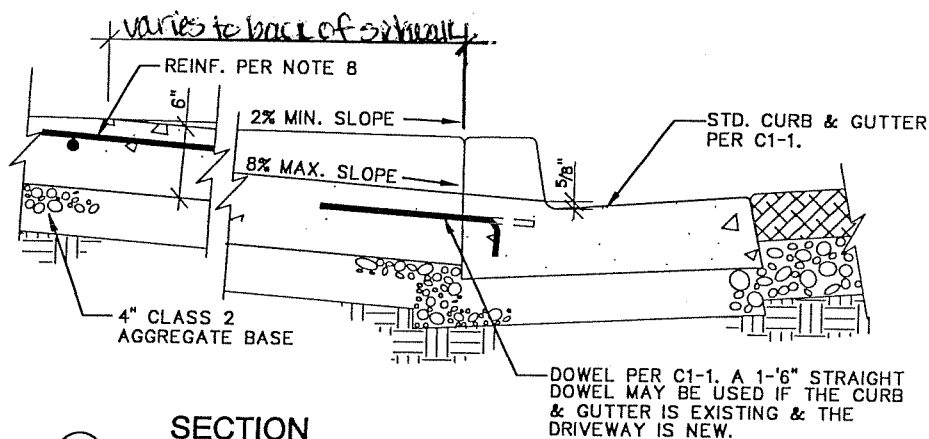
NOTES:

1. 90° WILL VARY IN FIELD DEPENDING ON EXACT CURVATURE OF CURB & PROPERTY LINE.
2. IF CONSTRUCTING A NEW DRIVEWAY AND THE DISTANCE BETWEEN FLARES IS LESS THAN 10'-0", CONTACT CITY ENGINEER FOR REQUIREMENTS.
3. (N) DRIVEWAYS SHALL BE INSTALLED AS FAR AS PRACTICABLE FROM THE INTERSECTION OR CURB RETURNS FOR SIGHT DISTANCE PURPOSES. CONTACT CITY TRAFFIC ENGINEER.
4. SEE C1-4 FOR LOCATION OF WEAKENED PLANE JOINTS & SCORE LINES.
5. SEE C1-4 FOR SIDEWALK CONST JOINTS.
6. EXPANSION JOINTS ARE REQUIRED EVERY 100' IN SIDEWALK.
7. WHEN REPLACING (E) CONC, SAWCUT AT NEAREST SCORE MARK, WEAKENED PLANE OR CONST JOINT, OR AS APP'D BY CITY ENGINEER.
8. TEMPERATURE OF MIXED CONCRETE MUST BE BETWEEN 50°F AND 90°F IMMEDIATELY PRIOR TO PLACING.
9. AN APPROVED CLEAR CURING COMPOUND SHALL BE SPRAYED ON THE CONCRETE AS SOON AS PRACTICABLE AFTER FINISHING.
10. CONCRETE SHALL BE CLASS "B".
11. 1 PINT/CU YD OF LAMP BLACK SHALL BE ADDED TO THE CONCRETE.
12. FINISHED CONC TO BE FREE OF GRAFFITI.
13. COMMERCIAL DRIVEWAYS SHALL HAVE #4's @ 18" O.C. EACH WAY.
14. #4 x 1'-6" DOWELS @ 4'-0" O.C. REQ'D IF CURB AND GUTTER ARE NOT MONOLITHICALLY POURED W/ DRIVEWAY APPROACH.
15. SUBGRADE SHALL BE COMPACTED TO 90% RELATIVE COMPACTION. AGGREGATE BASE SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
16. FOR GUTTER REPLACEMENT, EXISTING ASPHALT SHALL BE SAWCUT. IF A SMOOTH EDGE IS NOT POSSIBLE, A 12" CONFORMING AREA IS REQ'D. REPLACE WITH NEW A.C.

COMMERCIAL DRIVEWAY APPROACH

1

$\frac{3}{16}" = 1'-0"$



SECTION

COMMERCIAL DRIVEWAY

$\frac{3}{4}" = 1'-0"$



CITY OF PLEASANT HILL

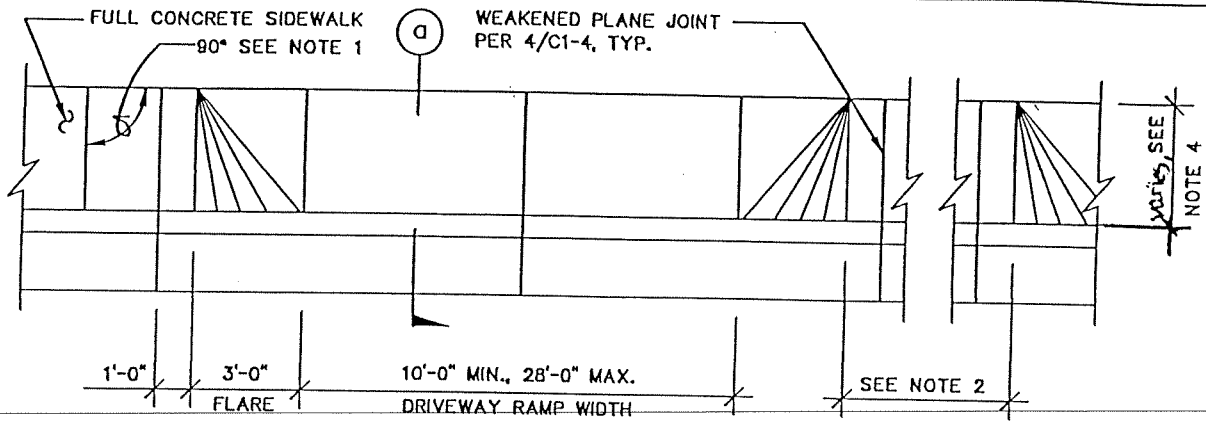
DEPARTMENT OF PUBLIC WORKS

DWG. NO.: C1-3

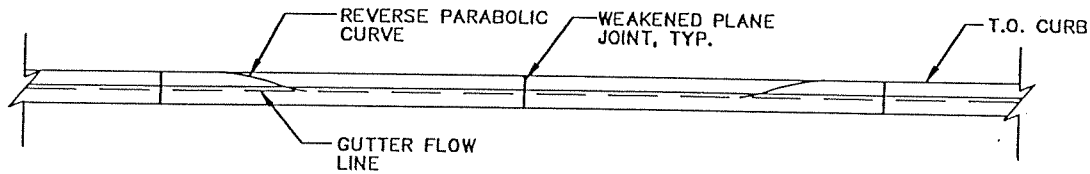
DATE: 8/2/99

SCALE: AS NOTED

COMMERCIAL DRIVEWAY APPROACH



PLAN



ELEVATION

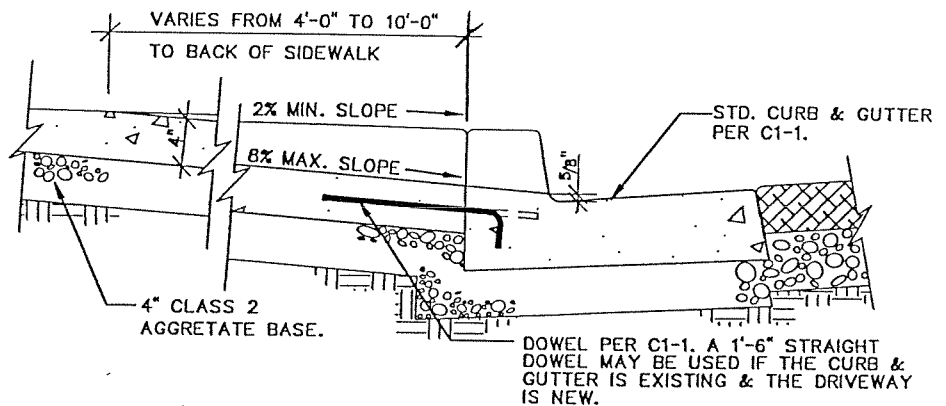
NOTES:

1. 90° WILL VARY IN FIELD DEPENDING ON EXACT CURVATURE OF CURB & PROPERTY LINE.
2. IF CONSTRUCTING A NEW DRIVEWAY AND THE DISTANCE BETWEEN FLARES IS LESS THAN 10'-0", CONTACT CITY ENGINEER FOR REQUIREMENTS.
3. (N) DRIVEWAYS SHALL BE INSTALLED AS FAR AS PRACTICABLE FROM THE INTERSECTION OR CURB RETURNS FOR SIGHT DISTANCE PURPOSES. CONTACT CITY TRAFFIC ENGINEER.
4. NORMAL DEPTH OF DRIVEWAY VARIES FROM 4'-0" TO 10'-0". IF CONSTRUCTING (N) DRIVEWAY &/OR SIDEWALK, CONTACT CITY ENGR FOR WIDTH REQUIREMENTS.
5. SEE C1-4 FOR LOCATION OF WEAKENED PLANE JOINTS & SCORE LINES.
6. SEE C1-4 FOR SIDEWALK CONST JOINTS.
7. EXPANSION JOINTS ARE REQUIRED EVERY 100' IN SIDEWALK.
8. WHEN REPLACING (E) CONC, SAWCUT AT NEAREST SCORE MARK, WEAKENED PLANE OR CONST JOINT, OR AS APP'D BY CITY ENGINEER.
9. TEMPERATURE OF MIXED CONCRETE MUST BE BETWEEN 50°F AND 90°F IMMEDIATELY PRIOR TO PLACING.
10. AN APPROVED CLEAR CURING COMPOUND SHALL BE SPRAYED ON THE CONCRETE AS SOON AS PRACTICABLE AFTER FINISHING.
11. CONCRETE SHALL BE CLASS "B".
12. 1 PINT/CU YD OF LAMP BLACK SHALL BE ADDED TO THE CONCRETE.
13. FINISHED CONC TO BE FREE OF GRAFFITI.
14. #4 x 1'-6" DOWELS @ 4'-0" O.C. REQ'D IF CURB AND GUTTER ARE NOT MONOLITHICALLY POURED W/ DRIVEWAY APPROACH.
15. SUBGRADE SHALL BE COMPACTED TO 90% RELATIVE COMPACTION. AGGREGATE BASE SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
16. FOR GUTTER REPLACEMENT, EXISTING ASPHALT SHALL BE SAWCUT. IF A SMOOTH EDGE IS NOT POSSIBLE, A 12" CONFORMING AREA IS REQ'D. REPLACE WITH NEW A.C.

RESIDENTIAL DRIVEWAY APPROACH

1

$\frac{3}{16}" = 1'-0"$



SECTION

RESIDENTIAL DRIVEWAY

$\frac{3}{4}" = 1'-0"$



CITY OF PLEASANT HILL

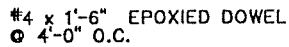
DEPARTMENT OF PUBLIC WORKS

DWG. NO.: C1-2

DATE: 8/2/99

SCALE: AS NOTED

**RESIDENTIAL DRIVEWAY
APPROACH**



NOTE:
GUTTER SHALL BE CLEANED OF A.C.
DURING ROLLING OPERATION.

①



②

1. EXISTING CONCRETE SHALL BE REMOVED TO THE NEAREST SCORE MARK OR CONSTRUCTION JOINT.
2. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT ENDS OF CURB RETURNS, CURB INLETS & OTHER STRUCTURES @ 10'-0" O.C. OR MATCH EXISTING.
3. CONCRETE SHALL BE CLASS "B" WITH A LIGHT BROOM FINISH.
4. AN APPROVED CLEAR CURING COMPOUND SHALL BE SPRAYED ON THE CONCRETE AS SOON AS PRACTICABLE AFTER FINISHING.
5. 1 PINT/CU YD OF LAMP BLACK SHALL BE ADDED TO THE CONC.
6. TEMPERATURE OF MIXED CONC. MUST BE BETWEEN 50°F & 90°F IMMEDIATELY PRIOR TO PLACING.
7. FINISHED CONCRETE SHALL BE FREE OF GRAFFITI.
8. WHEN SIDEWALK AND CURB ARE NOT MONOLITHIC, DOWELS SHALL BE PLACED IN CURB @ 4'-0" O.C.
9. ALL DOWELS SHALL HAVE MIN. 1 1/2" CONCRETE COVER.
10. SUBGRADE SHALL BE COMPACTED TO 90% RELATIVE COMPACTION. AGGREGATE BASE SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
11. FOR GUTTER REPLACEMENT, EXISTING ASPHALT SHALL BE SAWCUT. IF A SMOOTH EDGE IS NOT POSSIBLE, A 12" CONFORMING AREA IS REQ'D. REPLACE WITH NEW A.C.

CLASS 2 AGGREGATE BASE



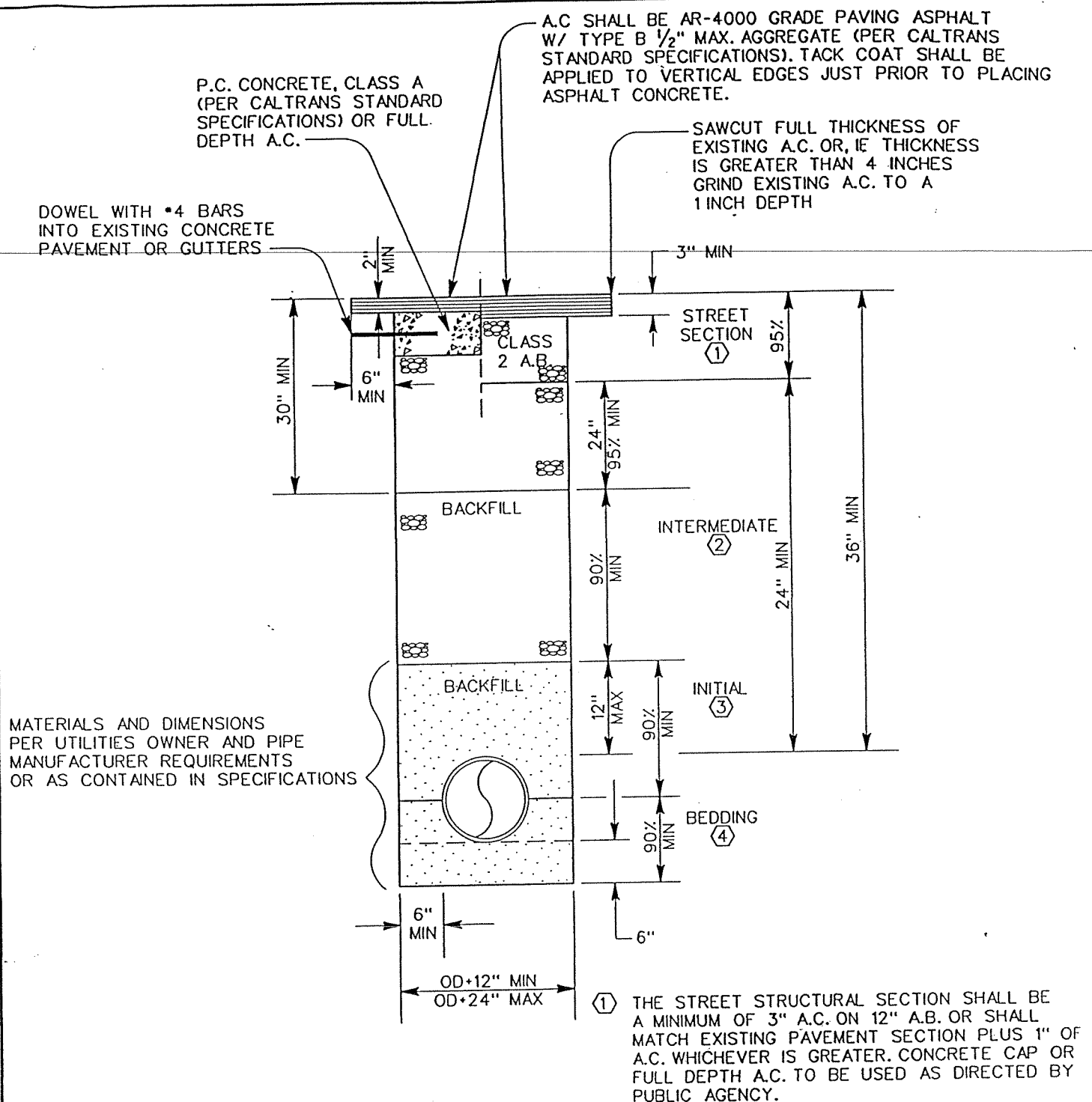
④



DEPARTMENT OF PUBLIC WORKS

SCALE: 1" = 1'-0"

STANDARD CURB, GUTTER, AND SIDEWALK



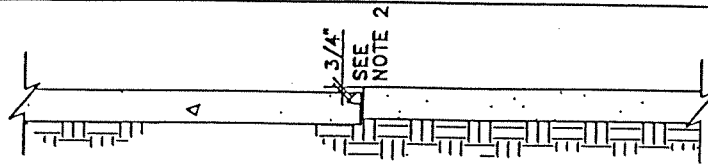
NOTES:

- 1 A STREET ENCROACHMENT PERMIT WILL BE REQUIRED FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- 2 ALL WORK TO BE DONE IN ACCORDANCE WITH PUBLIC AGENCY STANDARDS AND SPECIFICATIONS.
- 3 UNDERGROUND SERVICE ALERT (U.S.A.) SHALL BE NOTIFIED PRIOR TO BEGINNING WORK.
- 4 ALL EXCAVATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY.

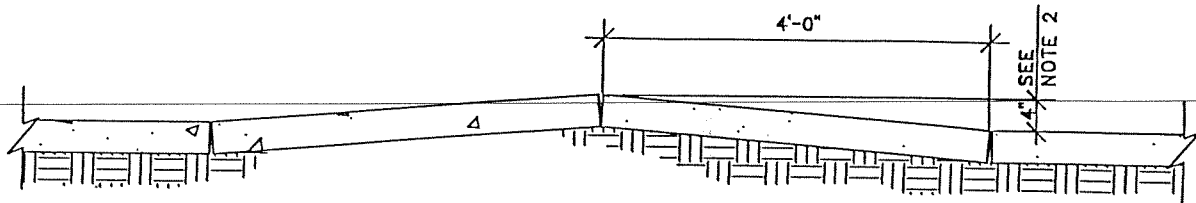
STANDARD TRENCH DETAIL

DATE: AUGUST 15, 1996

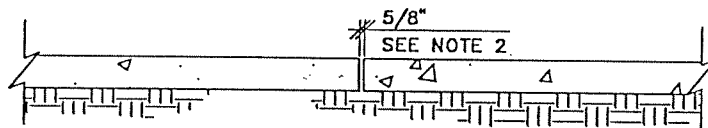
REV



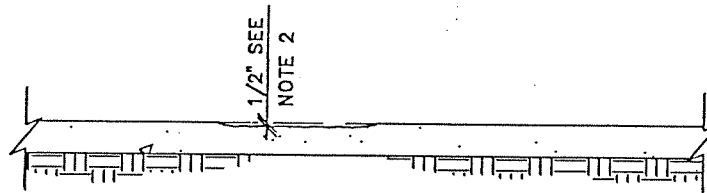
① SIDEWALK SEPARATION



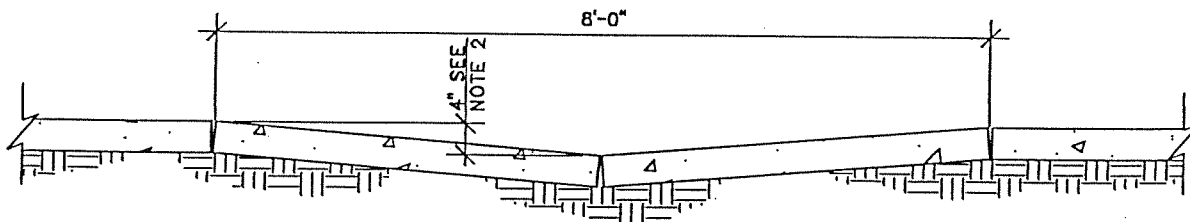
② RAISED SIDEWALK



③ OPENING IN SIDEWALK



④ SURFACE SPALLING



⑤ SUNKEN SIDEWALK

NOTES
 1. REPAIR CRITERIA INCLUDES
 CONCRETE SIDEWALK, ASPHALT
 PATH, CURB & GUTTER.
 2. VALUES LISTED ARE
 MINIMUM VALUES.



CITY OF PLEASANT HILL

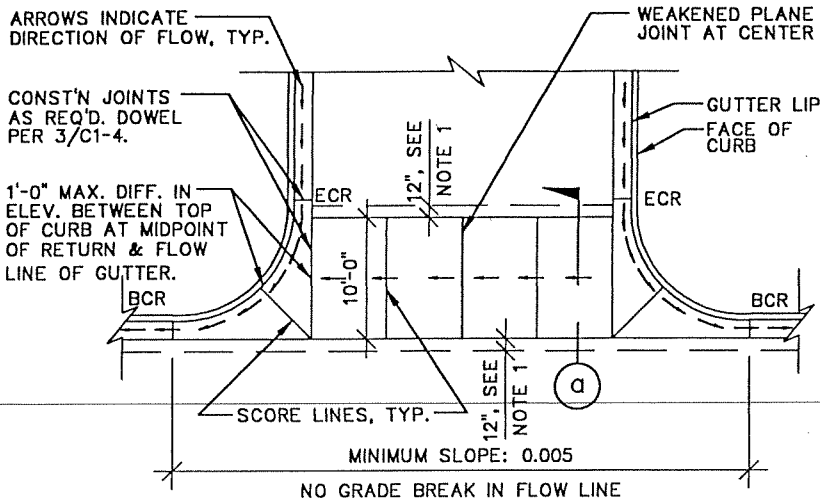
DEPARTMENT OF PUBLIC WORKS

DWG. NO.: C2-1.DWG

DATE: 6/7/99

SCALE: 1/2" = 1'-0"

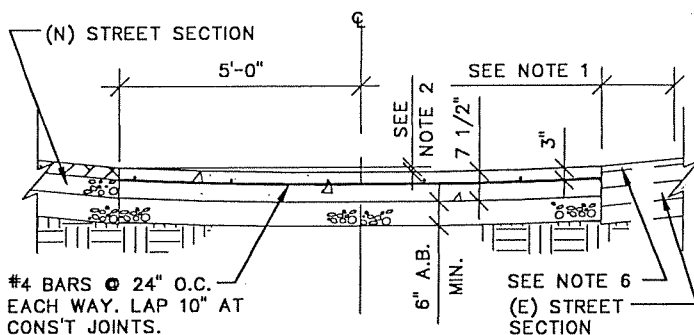
**SIDEWALK, CURB & GUTTER
 REPAIR CRITERIA**



TYPICAL PLAN

1

1/16" = 1'-0"



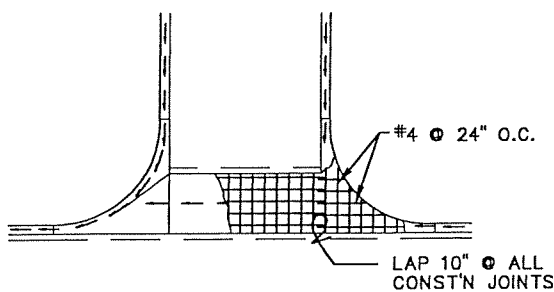
SECTION

a

1/4" = 1'-0"

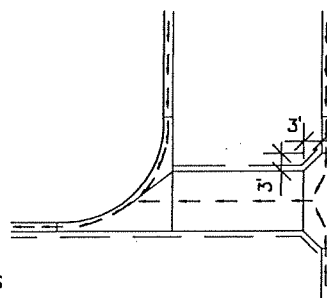
NOTES

1. WHEN REPLACING (E) VALLEY GUTTER WITHIN AN (E) STREET SECTION, CUT 12" AWAY FROM EDGE OF CONCRETE. CONCRETE. BACKFILL CONFORMING SECTION WITH ASPHALT CONCRETE.
2. 1 1/4" AT (N) VALLEY GUTTER. MATCH EXISTING FLOW CONDITIONS AT EXISTING VALLEY GUTTERS AS REQ'D.
3. CONCRETE TO BE CLASS "B".
4. INSTALLATION OF VALLEY GUTTERS ARE PERMITTED BY AUTHORITY OF THE ENGINEER ONLY.
5. MINIMUM CURB RADIUS OF 15'-0" AT (N) VALLEY GUTTERS.
6. A MINIMUM OF 1 1/2" OF A.C. SHALL ABUTT REPLACEMENT VALLEY GUTTER IN CONFORMING AREA. USE SECTION REQUIRED ON PLAN FOR NEW STREET.
7. ALL FINISHED CONCRETE INCLUDING VALLEY GUTTERS IS TO BE FREE OF GRAFFITI.



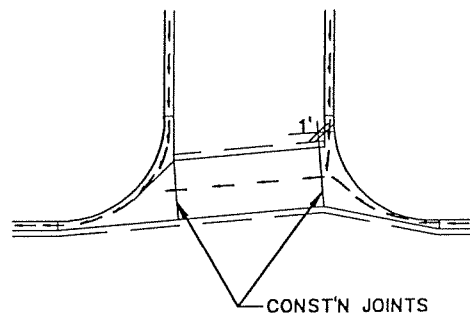
TYPICAL PLAN

NTS



T INTERSECTION

NTS



SKewed JUNCTION

NTS



CITY OF PLEASANT HILL

DEPARTMENT OF PUBLIC WORKS

DWG. NO.: C1-6
DATE: 7/23/99
SCALE: AS NOTED

**CONCRETE
VALLEY GUTTERS**

DEPARTMENT OF TRANSPORTATION

BOX 23660
OAKLAND, CA 94623-0660
(510) 286-4444
TDD (510) 286-4454



January 24, 1994

DRAFT PLANT LIST
FOR HIGHWAY PLANTING PROJECTS
WITHIN THE CITY OF PLEASANT HILL

Botanical Name	Common Name
<u>TREES</u>	
Arbutus 'Marina'	NCN
Cercis canadensis 'Cultivar'	Redbud
Cinnamomum camphora	Camphor
Ginkgo biloba 'Cultivar'	Maidenhair Tree
Lagerstroemia indica 'Cultivar'	Crape Myrtle
Laurus nobilis 'Saratoga'	Grecian Laurel
Liquidambar styraciflua 'Cultivar'	Sweetgum
Nyssa sylvatica	Tupelo
Pyrus calleryana 'Cultivar'	Ornamental Pear
Sapium sebiferum	Chinese Tallow Tree
Quercus palustris	Pin Oak
<u>SHRUBS</u>	
Arbutus unedo 'compacta'	Strawberry Tree
Arctostaphylos spp.	Manzanita
Coprosma kirkii x brunnea	NCN
Escallonia spp.	NCN
Mahonia spp.	Oregon/California Holly Grape
Nerium oleander 'Petite Pink/Salmon'	Petite Oleander
Prunus caroliniana 'Compacta'	Carolina Cherry Laurel
Rhaphiolepis indica 'Cultivar'	India Hawthorn
Rhamnus californica 'Eve Case'	California Coffeeberry
Rosmarinus officinalis 'Cultivar'	Rosemary
<u>VINES</u>	
Cissus antatctica	Kangaroo Treebine
Parthenocissus tricuspidata	Boston Ivy
<u>GROUND COVER</u>	
Dymondia margaratea	NCN
Juniperus horizontalis 'Cultivar'	Juniper

NCN=No Common Name

NOTE: 25% native plants are required on Caltrans planting projects

Public Works Standard Development CONDITIONS OF APPROVAL

General	
	The Project shall comply with all applicable requirements of the Municipal Code
	Grading/Drainage Permits: Grading/drainage permit(s) shall be obtained from the Public Works Department for the proposed earthwork in excess of 200 cubic yards.
	Encroachment Permit: - An encroachment permit shall be obtained from the Public Works Department for all work in the public right of way.
	The Developer shall pay all applicable City fees as established by City Council resolution and City ordinances.
Fees (see fee schedule).	
	The Developer shall pay permit issuance fees
	The Developer shall pay encroachment permit plan check fees
	The Developer shall pay encroachment inspection fees
	The Developer shall pay grading permit plan check fees
	The Developer shall pay grading inspection fees
	The Developer shall pay Subdivision improvement plan check fees
	The Developer shall pay Subdivision improvement inspection fees
	The Developer shall pay third party review fees (cost plus 10%)
	The Developer shall pay permit issuance fees
	The Developer shall pay encroachment permit plan check fees
	Traffic mitigation fees shall be paid in accordance with the Traffic Mitigation Fee Ordinance (Ord. 779, eff. 12/6/03). Fee is due prior to issuance of Building Permit except for residential development.
	Grading permit fees shall be paid prior to the issuance of grading permits.
	Drainage Area fees established by the Contra Costa County Flood Control and Soil Conservation District shall be paid in accordance with regulations establishing the Drainage Area (Timing, when?)
Bonding and Agreements	
	Bond amounts shall be based upon a Construction Estimate developed by the Developer's Civil Engineer or Contractor as reviewed and approved by the City.
	The Bond underwriter shall be licensed to do business in the State of California and have a Best's rating of not less than A: VII.
	A Cash Bond or Letter of Credit from a Financial Institution approved by the City may be submitted in-lieu of a Bond.
	A Performance Bond shall be submitted to the City prior to issuance of grading permits as required by the Director of Public Works or designee. The bond amount will account for costs to construct the approve grading and drainage plan, the costs to install and maintain erosion and sediment controls, and the costs of implementing pollution prevention best management practices during the course of construction.
	A Performance Bond and Payment Bond shall be submitted to the City prior to issuance of encroachment permits as required by the Director of Public Works or designee. The bond amount shall include costs of work zone traffic control including restoring the pavement delineation.
	A Cash bond of \$1000 shall be submitted to the City prior to issuance of grading permits.

	Faithful Performance and Material Bond shall be submitted to the City for new public improvements in compliance with Subdivision Agreement requirements and prior to recordation of the final map or parcel map.
	Maintenance (Guarantee and Warranty) Bond: Developer shall provide a bond or other acceptable financial assurance to the City at the completion of construction of the permitted improvements. The bond amount shall in the amount of 15 percent of the approved improvement construction estimate. The Bond shall be held for one year following completion and acceptance of the improvements. The purpose of the assurance is to correct defective work and to resolve outstanding labor and material payment claims.
	The Developer shall enter into a Subdivision Improvement Agreement with the City prior to recordation of the final map.
	If subdivision improvement construction deferment is warranted (as determined by the Director of Public Works), the Developer shall enter into a Deferred Improvement Agreement with the City prior to recordation of the final or map. The deferred improvement agreement shall be recorded with the final or parcel map.
	Agreement work scopes shall be acceptable to the Director of Public Works. Agreement forms shall be approved by the City Attorney and shall be recorded at the Office of the Contra Costa County Recorder with the Final Map.
	For any damage to existing public improvements due to construction activities, Developer shall repair, at their expense, damage prior to issuance of a Certificate of Occupancy. Contractor must protect all existing and new improvements.
	Mylar copies of record and as-built drawings shall be provided to the City prior to release of subdivision improvement bonds. The record map shall also be provided on a computer file format compatible with the City system.
Grading	
	Recommendations cited in the final City approved geologic and geotechnical report and peer review shall be implemented in the project design and construction. The Developer shall mitigate all issues revealed in the report and by any City or third party peer review as approved by the authorized Public Works staff.
	Soils Reports shall include an evaluation of geological hazard (landslides, liquefaction, ground faulting), stability of the proposed development site including surrounding properties. The report shall include recommendation to correct identified hazards and to mitigate impacts of the development.
	The Developer's Civil Engineer shall submit site improvement plans, grading plans, and public improvement plans, utility plans and landscape plans for review and approval by the Public Works Department prior to issuance of a grading permit. They must conform with the City's "Public Works Standards for Public Improvements." The plans shall include, but not be limited to: drainage, frontage improvements, utilities, and earthwork.
	The Developer's Civil Engineer shall submit an erosion control plan, including cost estimate, for review and approval by the Public Works Department.
	The Developer's contractor shall provide adequate dust control measures during grading.
	The Developer's contractor shall implement erosion control measures as per the erosion control plan and incorporating guidelines and measures from the most current ABAG manual for erosion and sediment control if grading work is not completed by October 15.
	The Developer's Soils Engineer shall inspect and certify the grading in conformance with the grading plan and geotechnical investigation report.
	The Developer's Civil Engineer shall certify the actual pad elevation for each lot.

	The Developer's contractor shall limit grading operations to 7:30 a.m. to 7:00 p.m. daily, except Sunday when grading is prohibited.
	The Developer's contractor shall limit construction of the building from 7:30 a.m. to 7:00 p.m., Monday through Friday, and 9:00 a.m. to 6:00 p.m., during Saturday and Sunday.
Drainage	
	Any detention facilities proposed shall be designed to accommodate access and maintenance. Detention design shall be subject to approval by the Department of Public Works prior to the issuance of any grading permits.
	Prior to approval of final project design, the Developer shall prepare a detailed drainage mitigation study, in coordination with the City of Pleasant Hill Public Works Department. Study shall determine runoff quantities of existing and proposed development. Study shall develop a plan to discharge runoff at historic rates.
	The Developer shall design, implement and maintain necessary and feasible improvements, including off site improvements such as flap gates and head walls to minimize the occurrence of localized flooding. Improvements shall meet with the approval of the Director of Public Works.
Utilities	
	Other agencies: obtain those permits required by other agencies having jurisdiction within construction area.
	Developer shall provide proof of service agreements to the Public Works Department prior to approval of improvement plans. The Developer shall submit evidence of approval of new utility facility plans by the respective utility agencies.
	Underground Utility Connections shall be made by bore/jack methods unless the street overlay work can be coordinated so that it is concurrent with the project construction. Plans shall include details of receiving pits.
Stormwater Pollution Prevention	
	Persons responsible for development projects disturbing 1 acre of land or more shall obtain a Notice of Intent (NOI) to comply with State of California General Construction NPDES Permit. A copy of this NOI shall be submitted to the Engineering Department prior to issuance of a grading permit.
	Developer shall implement efficient irrigation, appropriate landscape design, and proper maintenance to reduce excess irrigation runoff, promote surface filtration, and minimize use of fertilizers, herbicides, and pesticides.
	To the maximum extent feasible, drainage from paved surfaces shall be routed through grassy swales, buffer strips or sand filter prior to discharge into the storm drainage system.
	All permitted project storm drain inlets shall be imprinted with the "No Dumping, Drains Into the Bay" using thermoplastic or permanently embossed into the facility.
	Developer shall develop and implement a Water Pollution Prevention Plan that addresses construction related and post-construction related site management practices including litter control, motor vehicle washing and maintenance, storage of hazardous materials.
Peer Review	
	Third party peer reviews may be required as determined by the Director of Public Works. Such review shall be performed at the Developer's expense and may include the review of the final soils report, grading, hydrology, lot closure calculations, improvement plans, erosion control plans and post construction pollution prevention plans, field inspections of permitted work. Developer shall submit a deposit to the City prior to third party review.

Traffic	
	The Developer shall install on and off-site traffic mitigation improvements as recommended and accepted by the Director of Public Works.